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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

HOUSEKEEPERS' CHAT

Thursday, February 28, 1935.

(FOR BROADCAST USE ONLY)

Subject: "POINTS ON KEEPING THE HOUSE WARM AND COOL." Information from the Bureau of Agricultural Engineering, U.S.D.A.

--ooOoo--

I have a conundrum to ask you first thing this morning. If you are interested and "up on" modern house building, as so many women are nowadays, you'll have the answer right at your tongue's end.

Here's the conundrum -- and it only needs one word for an answer: "What keeps a house warm in winter and cool in summer?"

Or, perhaps I'd better phrase it this way: "What keeps heat inside a building in winter and outside in summer?"

The answer, in one word, is: "Insulation." That's one of those very technical sounding words that has a simple enough meaning. As you know, it just means something that "wraps up" the house to prevent heat from passing through the walls. The scientists say that heat has the property of passing directly through every known material, but that it goes through some materials more slowly than through others. So the best insulation is the material that has a high degree of heat-resisting ability -- for example, loose, bulky materials that provide plenty of spaces of still air. Little pockets of still or trapped air are hard for heat to penetrate. Nature provides many good insulating materials, and nowadays you can also buy excellent man-made insulations.

You know, the word may be modern, but the practice of insulation is as old as mankind itself. As soon as we human beings had to protect ourselves against the elements, we began working on this problem. So from ancient times the natives of the Tropics have protected themselves from the cruel rays of the sun by covering the sides and tops of their huts with layers and layers of dry grass with air spaces in between, of course. And the Eskimos in the Artic saved themselves from the cold by building the walls of their igloos with layers and layers of loosely packed snow blocks. Then, you know, our pioneer ancestors out on the prairies used earth and sod in building their shelters. And those that settled in wooded sections of the country used logs. Today in modern homes we can get this same comfort and protection from the elements by using various building methods and materials. I understand that there are now more than fifty man-made products for insulating homes on the market.

You can build these heat-and-cold-resisting products right into the walls, and floors and roofs of your home. You can use them as structural parts of the house or simply for insulating. As a rule, you'll find it an easier job to put in these insulating materials when you build your home, but, fortunately, with a little extra work you can also apply them to houses already built. In fact, thousands of homes all over this country whose builders put them up without much throught on this matter of heat and cold are being made comfortable now by added insulation.

Mr. Arthur H. Senner of the Bureau of Agricultural Engineering says that you will save a good deal on furnace expenses -- coal, wood or oil, if your house has good insulation. He has experimented and found that by adding as little as a half-inch layer of insulation to a house, the fuel expenses were cut from twenty to thirty percent. And a one-inch layer saved from thirty to forty percent.

Well, before long you won't be much interested in the furnace, or troubled about keeping the house warm. Spring and summer are just around the corner. But even in warm weather insulation will have a good deal to do with your comfort. A well-insulated house is just as much of a protection against summer heat as winter chill. When the temperature climbs high along with the summer sun, good insulation will keep you comfortable indoors, will shut out the afternoon heat and make the upstairs bedrooms comfortable for sleep. In many cases, Mr. Senner says, good insulation added to a house has cut down the room temperature in summer from ten to fifteen degrees.

Of course, you can insulate your house in many different ways -- too many for us to mention in this short conversation. We haven't time to go into all the different materials you can use and the different ways you can use them. But what every housewife ought to know as well as the man of the house is that you'll get a good deal of comfort, winter and summer, and you'll also save a good deal on fuel costs in winter if you look after the insulation of your house when you build or remodel it. Well-insulated houses not only make more comfortable living but have a greater loan and resale value.

The cost of insulating a house will depend on several things -- the part of the country where you are building, the insulating materials available, and whether you insulate when the house is built or later. To give you a very general idea of the expense, Mr. Senner says that a good job of insulating a six or seven-room house should cost somewhere around two or three hundred dollars when the house is built. If you add insulation <u>later</u>, the cost will depend on how you apply it and what material you use.

Many frame houses are cold in winter and uncomfortably hot in summer because the siding is defective or poorly installed. In this case, Mr. Senner says, you can shingle the outside of the walls and use a heavy building felt between the shingles and the siding. That will do a great deal toward keeping the heat <u>in</u> in winter and the heat <u>out</u> in summer.

Another typical example of an uncomfortable house that needs a protective "wrapper" is the two-story home with the first story of brick veneer and the second story of weatherboard or sided with lumber so full of cracks and openings that it is impossible to heat the upstairs bedrooms in cold weather. Mr. Senner advises shingling just the upstairs walls in this case -- the outside walls, and again using the felt underneath the shingles. Then floor the attic with insulating material so the heat can't escape up through the attic.

Before you build or remodel your home, you'll be wise to talk over the matter of insulation with reliable builders or building-supply houses. And you are welcome to Mr. Senner's bulletin called "Heating the Farm Home", which contains some helpful pointers on this matter. Send a postcard to the Department of Agriculture at Washington, D.C., asking for Farmers' Bulletin No. 1698-F -- "Heating the Farm Home." There's a copy for you as long as the supply lasts.

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